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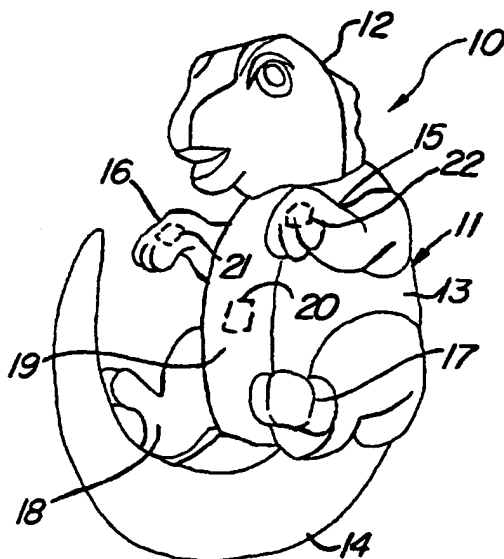
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(54) Title: TRANSFORMABLE TOY FIGURE HAVING ALTERNATIVE SOUNDS



(57) Abstract: A toy figure (10) is formed of an animal shaped fabric (11) and an egg shaped fabric (50), each of soft and pliable fabric and each commonly joined to the other by a common open aperture (45). The open aperture (45) and flexible fabric of the two forms (11, 50) allow one to be stuffed into the other through the common aperture (45) to provide a padded configuration of an animal toy or an egg shaped toy. Conventional sound unit (28) is supported within one of the flexible fabrics. First plurality of pressure-responsive switches (20, 21, 22) is supported within the animal-like flexible fabric while a second plurality (25, 26, 27) of pressure-responsive switches is supported within the egg-like flexible skin. The sound unit (28) produces a first set of sounds in response to actuation of the first plurality of switches and a second set of sounds in response to actuation of the second plurality of switches. In each configuration, one plurality of switches is inaccessible and one plurality is accessible.

WO 02/11843 A1

TRANSFORMABLE TOY FIGURE HAVING
ALTERNATIVE SOUNDS

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SPECIFICATION

10 Field of the Invention

This invention relates generally to toy figures and particularly to those having a transformable characteristic.

15 Background of the Invention

Plush toy figures are well known and extremely popular in the toy art. This popularity has existed for many years and has proven to be broadly based in a
20 substantial age range in both male and female children. Notsurprisingly, practitioner's in the toy arts have responded to this popularity by providing a variety of toy figures having plush characteristics. As a result, plush toy figures have been provided
25 which resemble animals, humans, fanciful characters and monsters, aliens, cartoon characters and the like. While the variety of plush toy figures is seemingly endless, virtually all plush toy figures include the same basic elements or components. These basic
30 elements or components include a soft flexible outer skin usually formed of a cloth fabric or the like and often supporting a simulated fur or velvet-type outer texture. The interior of the soft flexible outer skin is filled or stuffed with a soft resilient material

such as foam rubber or foam plastic. Other typical filler materials include fiber padding or other filler materials such as particulate materials or the like. Many plush toy figures include additional features

5 such as sound producing circuits supported within the toy figure interior. Sound circuits are well known in their fabrication and have included various electrical and electronic devices through the years. Presently, most sound circuits within toy figures are fabricated

10 using well known integrated circuit sound systems supported upon printed circuit boards and comprising and integrated circuit chip and associated memory together with an audio output circuit and an audio transducer such as a speaker or piezoelectric device.

15 In many plush toy figures having sound circuits supported therein, a plurality of activating switches are supported at selected portions of the body such as squeeze or pressure operated switches disposed in the hands or feet.

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One interesting type of plush toy figure to which the present invention relates is generally known in the art as "transformable". Transformable toy figures derive there name from their capability of being

25 configured in either of two alternate configurations by simply manipulating the parts of the toy figure. For the most part, this transformable characteristic is achieved by providing two cloth or fabric bodies joined at a common aperture therebetween. Each of the

30 cloth or fabric bodies may be forced into the remaining body through the common aperture to provide at least a portion of the filler or stuffing material thereof. For example, U.S. Patent 4,614,505 issued to Schneider et al sets forth a TRANSFORMABLE TOY FIGURE

which is progressively transformable into different configurations. The figures have a body portion comprising a mass of compliant fill material with a fabric cover there over. A fabric segment is secured
5 to the body portion and forms a pocket which is resiliently deformable to allow parts of the body portion and its material to be forced through the pocket as the toy is changed from one configuration to another.

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U.S. Patent Des.291,819 issued to Schneider et al sets forth a design for a TOY STUFFED FIGURE OR SIMILAR ARTICLE which is successively transformable between a fanciful animal character and a non-descript
15 spherical mass.

U.S. Patent 4,842,565 issued to VonPhilp, Sr. sets forth a REVERSIBLE STUFFED DOLL formed of two fabric sections with a cavity containing filling
20 material between them. Each fabric section has an outer facing surface having accent devices giving a specific appearance to each. An additional fabric section is provided to conceal one of the two appearances giving the doll alternative appearances.

25

U.S. Patent 4,413,442 issued to McSweeney sets forth a THREE DIMENSIONAL TRANSFORMABLE TOY having juxtaposed first and second surfaces which contain a discontinuity therethrough. A plurality of figure
30 forming elements are secured to one surface allowing the figure to be transformable from a first configuration to a second configuration or the reverse.

U.S. Patent 4,695,264 issued to McLeod, Jr. sets forth a CONVERTIBLE STUFFED FIGURE having two interconnected reversible figures. The two figures are joined to one another and include separate
5 internal cavities each having a capacity to hold or contain the other figure. The figures are joined to one another along a common opening.

U.S. Patent 4,781,648 issued to Garfinkel sets
10 forth a REVERSIBLE PLUSH TOY having a pair of substantially equal size fabric skin peripherally secured and configured to selectively expose each skin while enclosing the remaining skin. Each skin includes multiple appendages associated therewith and
15 aligned with the appendages associated with the remaining skin. The appendages of each aligned set of appendages are invertible one within the other for an outward projection of an appendage associated with an exposed skin.

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U.S. Patent 5,090,938 issued to Reynolds sets forth a TOY OR OTHER OBJECT ALTERABLE BETWEEN TWO DIFFERENT SHAPES having an animal-like character and a generally spherical skin resembling a globe joined at
25 a common aperture whereby the animal character may be stuffed into the globe to complete a stuffed globe figure or alternatively the globe skin may be stuffed into the animal figure to provide fill therefore.

30

U.S. Patent 5,649,848 issued to Clark sets forth a REVERSIBLE PLUSH TOY having two designs such as two animal shapes. The two designs turn inside out into each other by consuming and regurgitating each other through their wide mouths which they share.

U.S. Patent 4,404,689 issued to DeWan sets forth a FLEXIBLE CONTAINER HAVING A PREDETERMINED THREE DIMENSIONAL SHAPE which represents the reproduction of a desired item. The container is joined to garment or similar article such that the container may be stuffed with the garment or similar article. The garment or article may be completely withdrawn from the container and used in accordance with its conventional use.

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U.S. Patent 5,813,895 issued to Cho and U.S. Patent 5,846,116 issued to DiResta et al set forth toy figures encloseable within a simulated egg.

Practitioner's in the art have also provided a variety of toy figures which include sound producing systems such as those set forth in U.S. Patent 5,795,213 issued to Goodwin entitled READING TOY, U.S. Patent 5,501,627 issued to Ekstein and entitled CHILDREN'S TOY WITH PEAK-A-BOO ACTIVATION and U.S. Patent 3,977,292 issued to Favilli et al setting forth a TOY FIGURE HAVING TUNED SOUND PRODUCERS AND INDICIA. U.S. Patent 5,316,515 issued to Hyman et al sets forth a sound producing toy configured to resemble the upper head and neck of a horse secured to the wearers waist and having sound producing apparatus therein.

While the foregoing described prior art devices have to some extent improved the art and have in some instances enjoyed commercial success. There remains nonetheless a continuing need in the art for evermore improved interesting and novel toy figures.

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Summary of the Invention

Accordingly, it is a general object of the present invention to provide an improved transformable toy figure. It is a more particular object of the present invention to provide an improved transformable toy figure in which the alternative transforming configurations are enhanced in their distinctive characteristic and performance.

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In accordance with the present invention there is provided a transformable toy figure comprising: a first outer skin defining a first shape; a second outer skin defining a second shape, the first and second outer skins defining a common aperture at a juncture of the first and second outer skins whereby each of the outer skins may be transferred into the remaining outer skin to transform the toy figure between a first configuration and a second configuration; a sound unit supported within the first outer skin for producing first and second sound; a first plurality of switches supported within the first outer skin and coupled to the sound unit; and a second plurality of switches supported within the second outer skin and coupled to the sound unit, the sound circuit producing the first sound in response to the first plurality of switches and the second sound in response to the second plurality of switches, the first plurality of switches being accessible and the second plurality of switches being inaccessible in the first configuration and the second plurality of switches being accessible and the first plurality of switches being inaccessible in the second configuration.

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Brief Description of the Drawings

The features of the present invention, which are
5 believed to be novel, are set forth with particularity
in the appended claims. The invention, together with
further objects and advantages thereof, may best be
understood by reference to the following description
taken in conjunction with the accompanying drawings,
10 in the several figures of which, like reference
numerals identify like elements and in which:

Figure 1 sets forth a perspective view of a
transformable toy figure constructed in accordance
15 with the present invention in its animal
configuration;

Figure 2 sets forth a perspective rear view of
the present invention transformable toy figure in its
20 animal-like configuration;

Figure 3 sets forth a perspective rear view of
the present invention transformable toy figure at the
initiation of its transformation to its alternate
25 configuration;

Figure 4 sets forth a perspective side view of
the present invention transformable toy figure having
both skin portions exposed at the approximate mid-
30 point transformation;

Figure 5 sets forth a front perspective view of
the present invention transformable toy figure during

its transformation to the alternate egg-like configurations;

Figure 6 sets forth a perspective view of the present invention transformable toy figure in its egg-like configuration;

Figure 7 sets forth a front view of the sound producing unit of the present invention transformable toy figure;

Figure 8 sets forth a section view of the sound producing unit of Figure 7 taken along section lines 8-8 therein;

Figure 9 sets forth a schematic block diagram of the sound producing circuit utilized within the sound unit of Figures 7 and 8.

Description of the Preferred Embodiment

Figure 1 sets forth a front perspective view of a toy figure constructed in accordance with the present invention and generally referenced by numeral 10. Toy figure 10 is shown in Figure 1 in its animal-like configuration which in the embodiment set forth in Figures 1 through 5 generally resembles a fanciful characterization of a young dinosaur. Accordingly, toy figure 10 includes an animal skin 11 formed of a flexible fabric or cloth material which includes a torso 13, a head 12 and a tail 14. Animal skin 11 further includes a belly portion 19 and a pair of front legs or arms 15 and 16. In further accordance with the present invention, toy figure 10 includes a

plurality of pressure-responsive switches 20, 21 and 22 supported upon the interior surface of animal skin 11 beneath belly 19 and arms 16 and 15 respectively. While a variety of support apparatus may be used for pressure-responsive switches 20 through 22, it has been found advantageous to secure switch 20 through 22 within fabric pockets formed on the interior surface of animal skin 11. With temporary reference to Figure 6, an exemplary pocket 28 shown supporting a pressure-responsive switch 25 upon the undersurface or interior surface of eggshell skin 50. It will be understood for those skilled in the art that each of the various pressure-responsive switches shown in Figures 1 through 9 of the present invention embodiment therein utilize this form of switch attachment. It will be equally recognized however, that other forms of attachment such as adhesive attachment or the like may be utilized without departing from the spirit and scope of the present invention. The importance of the positioning and support of pressure-responsive switches 20 through 22 is the support thereof sufficiently close to animal skin 11 to facilitate response to pressure applied by touching the outer surface of animal skin 11 and providing switch activation. In the case of arms 15 and 16, the user may choose to simply squeeze the hand or paw portions thereof to activate switches 22 and 21.

In the configuration shown in Figure 1, toy figure 10 provides a suitable amusing plush toy figure for conventional play. In the preferred embodiment and in the manner set forth below in Figure 9, switches 20, 21 and 22 cause internal sound unit 23 (seen in Figure 4) to produce sounds characteristic of

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a dinosaur "roar" or "screech" or other suitable animal sound whether real or fanciful.

Toy figure 10 is transformable from the animal-like configuration shown in Figure 1 to an egg-shaped configuration shown in Figure 6. The transformability of toy figure 10 is carried forward largely in accordance with conventional fabrication techniques, utilizing a pair of outer skins joined along a common aperture. Accordingly, and as is best seen in Figure 3, animal skin 11 is packed or "stuffed" with an eggshell skin 50 to provide a soft padded body when toy figure 10 is in the animal-like configuration shown in Figure 1.

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Figure 2 sets forth a rear perspective view of toy figure 10 in the animal-like configuration at the initiation of transformation of the animal-like configuration of Figure 1 to the egg resembling configuration shown in Figure 6. Thus, as is described above, toy figure 10 includes an animal skin 11 having a torso 13, a plurality of legs such as leg 17, a tail 14, a front leg or arm 15 and a head 12. Animal skin 11 further supports a zipper 40 having a zipper tab 41 and a covering zipper flap 42. Flap 42 is formed of a generally loose fabric material preferably matching animal skin 11 and forms the primary function of covering the exposed portion zipper 40.

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In the configuration shown in Figure 2, zipper 40 is closed and toy figure 10 is configured in its animal-like configuration. The transformation of toy figure 10 from the animal-like configuration of Figure

2 to the egg-like configuration of Figure 6 is initiated by folding zipper flap 42 away from zipper 40 and grasping tab 41 opening zipper 40.

5 Figure 3 sets forth a rear perspective view of toy figure 10 following the opening of zipper 40. More specifically, and as is set forth above, toy figure 10 includes an animal skin 11 defining a torso 13, a head 12, a tail 14, a leg 17, and an arm 15. As
10 is also described above, animal skin 11 supports a zipper 40 having a movable zipper tab 41 and a zipper flap 42.

 In the configuration shown in Figure 3, zipper 40
15 has been opened to expose an eggshell skin 50 formed of a flexible fabric material. In accordance with the transformable character of toy figure 10, eggshell skin 50 has been stuffed into the interior of animal skin 11 to provide padding or fill therefore in the
20 animal-like configuration of Figures 1 through 3. Eggshell skin 50 is preferably formed of a flexible fabric or cloth material and as is better seen in Figure 4, is joined to animal skin 11 along a common aperture 45. The transformation of toy figure 10
25 continues once zipper 40 is opened as the user reaches into animal skin 11 and withdraws eggshell skin 50 to its full extent resulting in the configuration shown in Figure 4.

30 Figure 4 sets forth a partially sectioned perspective view of toy figure 10 at an intermediate point in the transformation process. At this intermediate point, both animal skins (animal skin 11

and eggshell skin 50) are fully exposed and are joined along a common aperture 45.

More specifically, animal skin 11 includes a
5 torso 13 having an aperture 45 formed therein. Animal skin 11 further includes a head 12, a tail 14, a pair of legs 17 and 18, a pair of arms 15 and 16 and a belly portion 19. As is described above in Figure 1, arms 15 and 16 support pressure-responsive switches 22
10 and 21 respectively while belly portion 19 supports pressure-responsive switch 20.

Toy figure 10 further includes an eggshell skin 50 having a common aperture 45 formed therein and
15 joined to the common aperture of animal figure 11 using conventional attachment such as sewn stitching or the like. A zipper flap 42 extends along one side of common aperture 45. While not visible in Figure 4, it will be understood by reference to Figure 3, that
20 zipper 40 provides opening and closure of common aperture 45.

Eggshell skin 50 supports a plurality of pressure-responsive switches 25, 26 and 27 upon the
25 interior surface thereof. As is illustrated in Figure 6, pressure-responsive switches 25 through 27 are supported upon the interior surface of eggshell skin 50 by a corresponding plurality of fabric pockets such as fabric pocket 28 supporting switch 25 shown in
30 Figure 6.

In further accordance with the present invention, a sound unit 23 shown in greater detail in Figures 7 and 8 supports an internal sound producing circuit

(circuit 64 shown in Figure 9). In the preferred fabrication of the present invention, sound unit 23 is supported within eggshell skin 50 using a fabric pocket similar to pocket 28 shown in Figure 6.

5 However, it will be apparent to those skilled in the art that sound circuit 23 may be supported in accordance with a variety of conventional supports including but not limited to a surrounding quantity of fabric fill or padding.

10

In accordance with an important aspect of the present invention, pressure-responsive switches 20, 21 and 22 are supported entirely within animal skin 11 and are excluded from eggshell skin 50. Conversely,
15 and in continued further accordance with an important aspect of the present invention, pressure-responsive switches 25, 26 and 27 are supported within the interior surface of eggshell skin 50 to the exclusion of animal skin 11. Switch 20, 21 and 22 are coupled
20 to sound unit 23 by a plurality of connecting wires 30, 31 and 32. Similarly, switches 25, 26 and 27 are coupled to sound unit 23 by a plurality of connecting wires 35, 36 and 37.

25 Thus, as will be apparent from examination of Figure 4 and equally apparent by comparison of Figures 1 and 6, switches 20, 21 and 22 are exposed and capable of actuation only when toy figure 10 is configured in the animal-like configuration of Figure
30 1 while switches 25, 26 and 27 are buried within the interior packing which eggshell skin 50 provides in the animal-like configuration. Conversely, switches 25, 26 and 27 are exposed to pressure actuation when toy figure 10 is configured in the egg-like

configuration shown in Figure 6 to the exclusion of switches 20, 21 and 22 which are packed within the interior of eggshell skin 50 in the egg-like configuration and as a result are isolated pressure
5 actuation.

Figure 5 sets forth a perspective view of toy figure 10 at the final stage of transformation. As described above, toy figure 10 includes an animal skin
10 11 having a head 12, a torso 13, a tail 14, arms 15 and 16 together with legs 17 and 18. Toy figure 10 further includes an eggshell skin 50 joined to animal skin 11 at a common aperture 45. A zipper 40 and a flap 42 provide closure of common aperture 45.

15

At the point of configuration or transformation shown in Figure 5, animal skin 11 is being folded and compacted to facilitate its insertion into eggshell skin 50 through common aperture 45. This method of
20 transformation of a plush figure is in accordance with a well known fabrication. Once animal skin 11 has been forced into the interior of eggshell skin 50, it provides a suitable fill or padding for toy figure 10 in the egg-like configuration shown in Figure 6. The
25 transformation is completed once animal skin 11 has been inserted into eggshell skin 50 by the closure of zipper 40.

Figure 6 sets forth a perspective view of toy
30 figure 10 in the alternate egg shaped configuration. In this configuration, eggshell skin 50 surrounds and encloses animal skin 11 (seen in Figure 5) while flap 42 covers zipper 40 to complete the eggshell closure. The resulting configuration provides an egg shaped

object which is relatively soft and pliable. In accordance with the present invention, a plurality of pressure-responsive switches 25, 26 and 27 are supported within toy figure 10 on the interior surface of eggshell skin 50. By way of illustration, a pocket 28 formed of a fabric material or other suitable material is secured to the interior surface of eggshell skin 50 to enclose and support pressure-responsive switch 25. While not seen in Figure 6, it will be understood that switches 26 and 27 are similarly supported within the interior of eggshell skin 50.

Of importance with respect to the present invention is the placement of one plurality of pressure-responsive switch upon eggshell skin 50 for exposure to outside pressure actuation by user touching when toy figure 10 is in the egg shaped configuration and the envelopment enclosure and isolation of the remaining plurality of pressure-responsive switches (switches 20, 21 and 22 shown in Figure 1) within the egg shaped object interior.

In accordance with the operation of sound unit 23 set forth below, sound unit 23 responds to pressure actuation of any of switches 25 through 27 by producing a sound different in character from that provided when any of switches 20 through 22 is actuated (seen in Figure 1). In the preferred fabrication of the present invention, a heartbeat-like sound has been selected to be provided when toy figure 10 is in the configuration shown in Figure 6 in response to actuation of any of switches 25 through 27. It will be apparent that other alternative sounds

suitably appropriate to the egg shape of toy figure 10 in the configuration of Figure 6 may be selected. However, it has been found particularly amusing to provide a heartbeat sound in the egg shaped
5 configuration of the present invention toy figure.

It will be apparent to those skilled in the art that toy figure 10 may be returned to the animal-like configuration of Figure 1 by reversing the above
10 described transformation process. It will be equally apparent to those skilled in the art that at the conclusion of this reverse transformation to the configuration of Figure 1, switches 25 through 27 will be isolated within the interior of animal skin 11 and
15 thus protected against actuation by the user while switches 20 through 22 will again be restored to accessibility and user actuation. Thus, in accordance with an important aspect of the present invention, toy figure 10 produces one set of audible responses or
20 sounds in the animal-like configuration and a different set of audible responses and sounds when configured in the egg shaped configuration. In this manner, the character of the transformable toy figure of the present invention is altered in a suitable
25 manner of sound output depending upon the configuration of the transformable toy figure.

Figure 7 sets forth a front view of sound unit 23. Sound unit 23 includes a housing 60 supporting a
30 grille 61. Sound unit 23 may be fabricated in accordance with conventional fabrication techniques such as molded plastic or the like.

Figure 8 sets forth a section view of sound unit 23 taken along section lines 8-8 in Figure 7. Sound unit 23 includes a housing 60 supporting a grille 61 having a plurality of apertures formed therein. Sound unit 23 further includes a battery power supply 62 and a piezoelectric transducer 63. It will be apparent to those skilled in the art that alternative transducers may be used in place of piezoelectric transducer 63 such as small speakers or the like without departing from the spirit and scope of the present invention. A sound circuit 64 includes a printed circuit board 59 supporting a plurality of conventional electronic circuit components such as integrated circuit 65 and audio output transducer 66. Housing 60 further supports a connector 69 having a plurality of connecting wires 30 through 32 and 35 through 37 coupled thereto. Connector 69 is received and supported within housing 60 and is coupled to wires 30 through 32 and 35 through 37 entirely in accordance with conventional fabrication techniques. While not seen in Figure 8, it will be understood that a plurality of internal connecting wires provides connection between plug 69 and sound circuit 64. Further, while not seen in Figure 8, it will be understood that a further plurality of wires operatively couples circuit 64 to battery 62 and piezoelectric transducer 63. These wires are omitted to avoid unduly cluttering Figure 8 and may be implemented entirely in accordance with conventional fabrication techniques to provide the resulting circuit in Figure 9.

Figure 9 sets forth a block diagram circuit of sound circuit 64 and its associated operative

components. Sound circuit 64 may be fabricated entirely in accordance with conventional fabrication techniques which are often utilized in providing relatively small low-cost sound circuitry within toys or other apparatus. Thus, sound circuit 64 includes an integrated circuit sound device 65 having an associated memory device 67 operatively coupled thereto. Circuit 65 is further coupled to an audio output circuit 68 which in turn is coupled to an electro-acoustic transducer 63. As is seen in Figure 8, transducer 63 may, for example, be provided by a piezoelectric device. A first plurality of pressure actuated switches 20, 21 and 22 is coupled to a trigger input of circuit 65. A second plurality of pressure-responsive switches 25, 26 and 27 is coupled to an alternative input to circuit 65. It will be recalled from the above descriptions that switches 20, 21 and 22 are exposed and actuated in the animal-like configuration of Figure 1 while switches 25, 26 and 27 are exposed for actuation in the egg-like configuration of Figure 6.

Sound circuit 64 is fabricated in accordance with conventional fabrication techniques and utilizes an internal memory 67 having stored audio data and a microprocessor (within sound circuit integrated circuit 65) having a stored instruction set to provide sound signal output. It will be well understood by those skilled in the art that virtually any standard sound circuit may be utilized in place of sound circuit 64. The essential characteristic of sound circuit 64 is the provision of appropriate audio signals to transducer 63 for audiblizing a predetermined sound message or sound combination each

time a switch is actuated by pressing. For example, a combination of a microprocessor, read only memory, audio synthesizer, an audio output amplifier suitable for the functioning of sound circuit 64 is formed as a single integrated circuit chip device manufactured by Texas Instruments, Inc. under the device name TMS 50C44. However, it will be understood that a variety of standard integrated circuit devices may be utilized for sound circuit 64.

10

In operation, sound circuit 65 and memory 67 cooperate to cause sound circuit device 65 to respond to the actuation of any one of switches 20 through 22 to retrieve a first set of sound data from memory 67 and convert it to appropriate output format to drive audio output device 68. Thus, sound circuit integrated circuit 65 will be understood to include appropriate digital to analog conversion apparatus whereby audio output device 68 drives speaker 63 with audio signals of an analog character. Conversely, integrated circuit 65 is pre-programmed to respond to the activation of any one of switches 25 through 27 to select a different set of audio data from memory 67 and convert it to appropriate analog format to cause audio output device 68 to drive transducer 63 with a different set of audio data thereby producing a different set of sounds. While virtually any differing sound sets may be used without departing from the present invention, it has been found advantageous to utilize sounds characteristic of a dinosaur or other animal in response to switches 20 through 22 while providing a heartbeat sound in response to any of switches 25 through 27.

Thus, in accordance with the present invention, the transformable toy figure shown and described above is alternately configurable in either an animal-like configuration or an egg-like configuration. In
5 accordance with an important aspect of the present invention, the internal sound unit within the figure is caused to operate to produce a first set of sounds in the animal-like configuration and a second differing set of sounds in the egg-like configuration.
10 This has been found to add considerable amusement and realism to the toy figure. This has also been found to greatly enhance the transformation of the transformable figure due to the differing sounds produced in each configuration.

15

While particular embodiments of the invention have been shown and described, it will be obvious to those skilled in the art that changes and modifications may be made without departing from the
20 invention in its broader aspects. Therefore, the aim in the appended claims is to cover all such changes and modifications as fall within the true spirit and scope of the invention.

25

THAT WHICH IS CLAIMED IS:

1. A transformable toy figure comprising:

a first outer skin defining a first shape;

a second outer skin defining a second shape,
said first and second outer skins defining a common
aperture at a juncture of said first and second outer
skins whereby each of said outer skins may be
transferred into the remaining outer skin to transform
said toy figure between a first configuration and a
second configuration;

a sound unit supported within said first
outer skin for producing first and second sound;

a first plurality of switches supported
within said first outer skin and coupled to said sound
unit; and

a second plurality of switches supported
within said second outer skin and coupled to said
sound unit, said sound circuit producing said first
sound in response to said first plurality of switches
and said second sound in response to said second
plurality of switches,

said first plurality of switches being
accessible and said second plurality of switches being
inaccessible in said first configuration and said
second plurality of switches being accessible and said
first plurality of switches being inaccessible in said
second configuration.

2. The transformable toy figure set forth in claim 1 wherein said first shape defines an animal and said second shape defines and egg.

3. The transformable toy figure set forth in claim 2 wherein said animals generally resembles a dinosaur.

4. The transformable toy figure set forth in claim 1 wherein said first and second outer skins are formed of a flexible cloth fabric.

5. The transformable toy figure set forth in claim 4 wherein said first shape defines an animal and said second shape defines and egg.

6. The transformable toy figure set forth in claim 5 wherein said animals generally resembles a dinosaur.

7. A transformable toy figure comprising:

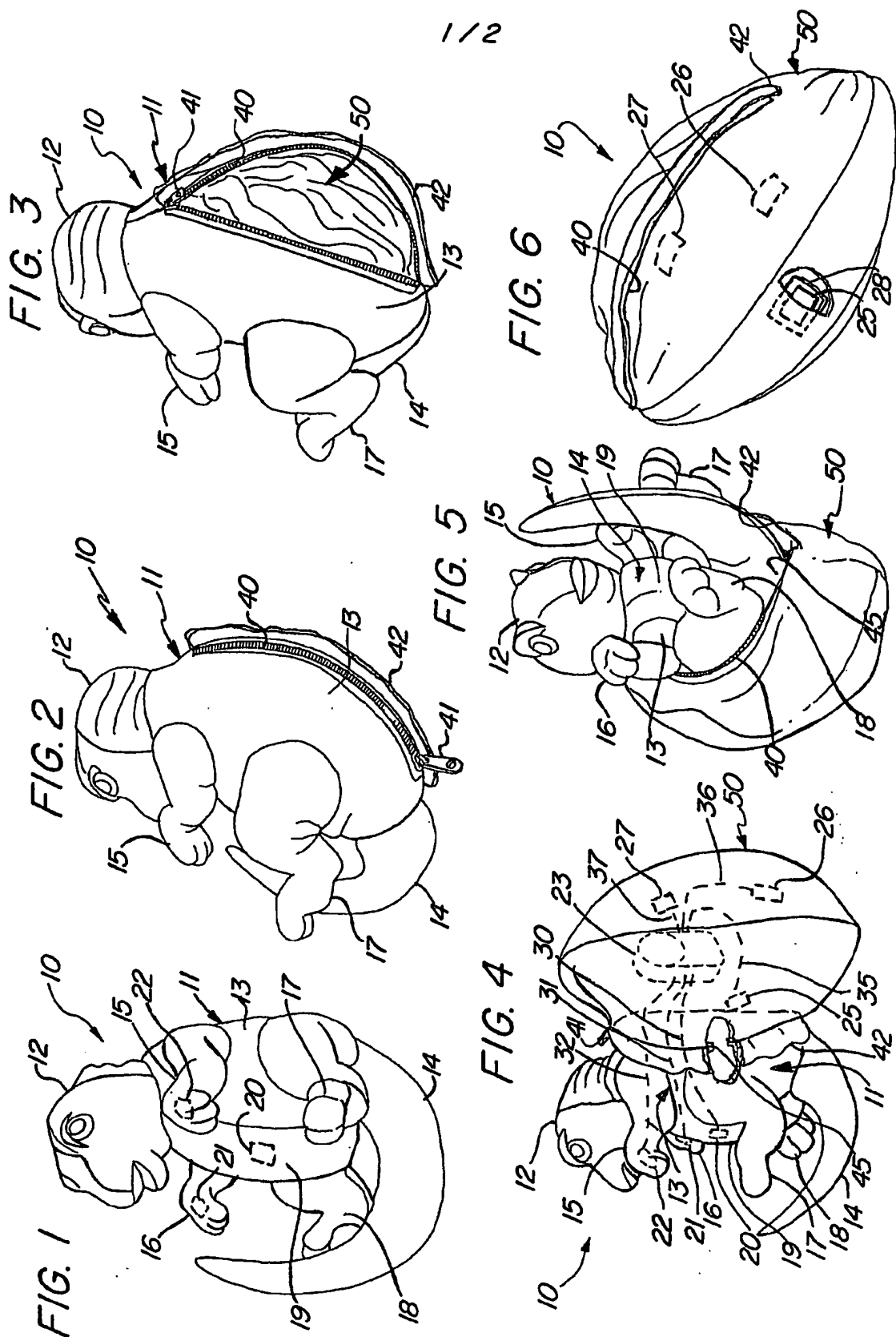
first and second outer skins each alternatively insertable into the other to produce first and second configuration; and

means for producing a first set of sounds when said toy is in said first configuration in response to touching of said first outer skin and for producing a second set of sounds when said toy figure is in said second configuration in response to touching of said second outer skin.

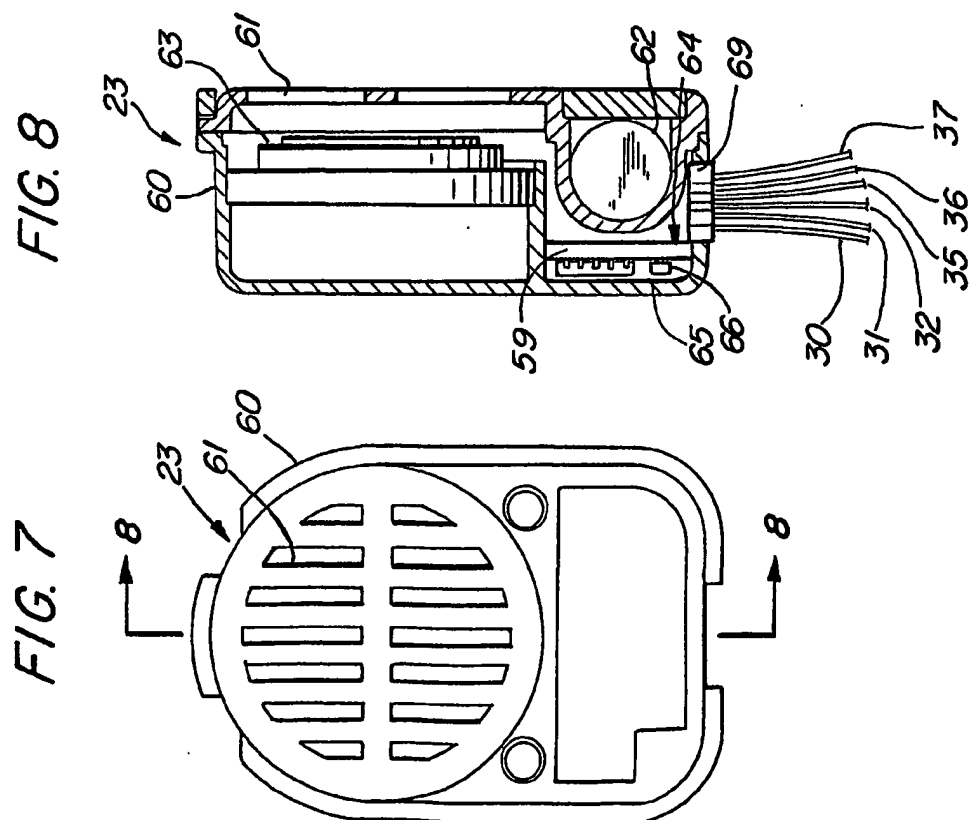
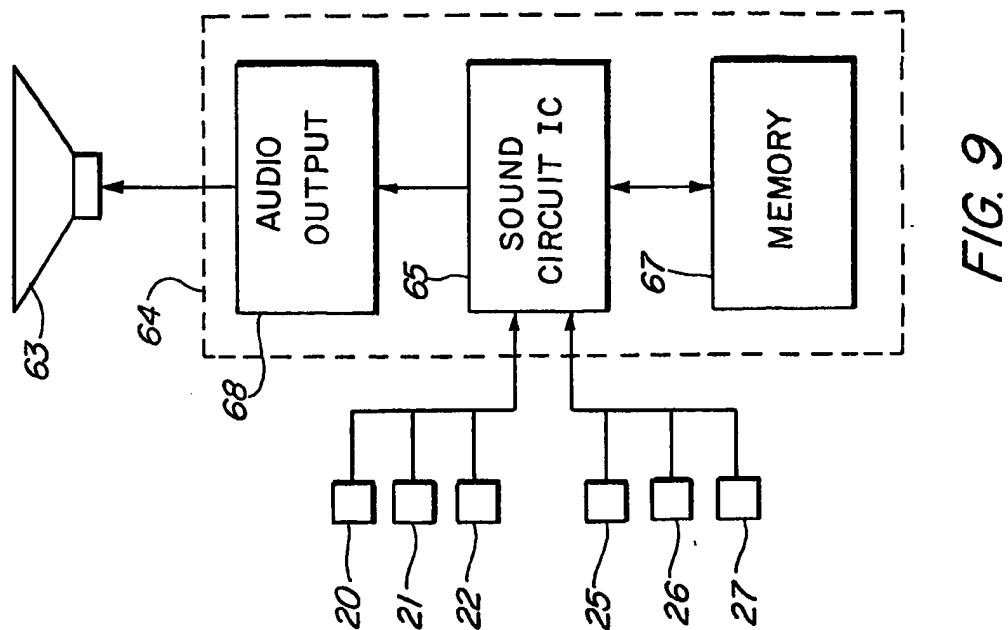
8. The transformable toy figure set forth in claim 7 wherein said first and second outer skins are formed of flexible fabric joined at a common aperture.

9. The transformable toy figure set forth in claim 8 wherein said first outer skin defines an animal shape and said second outer skin defines an egg shape.

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2/2



INTERNATIONAL SEARCH REPORT

International application No.
PCT/US01/22946

A. CLASSIFICATION OF SUBJECT MATTER IPC(7) :A63H 3/28, 3/12 US CL :446/297, 321 According to International Patent Classification (IPC) or to both national classification and IPC																				
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S. : 446/297, 321 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched 446/297,299,302,303,321,337,368,484 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) East, Reversible, sounder or sounding unit, toy or toys or 446/class																				
C. DOCUMENTS CONSIDERED TO BE RELEVANT																				
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.																		
A	US 3,538,638 A (GLASS et al.) 10 November 1970.																			
A	US 4,413,442 A (McSWEENEY) 08 November 1983.																			
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<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.																				
<table border="0"> <tr> <td>* Special categories of cited documents:</td> <td>"T"</td> <td>later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</td> </tr> <tr> <td>"A" document defining the general state of the art which is not considered to be of particular relevance</td> <td>"X"</td> <td>document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</td> </tr> <tr> <td>"E" earlier document published on or after the international filing date</td> <td>"Y"</td> <td>document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</td> </tr> <tr> <td>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td> <td>"G"</td> <td>document member of the same patent family</td> </tr> <tr> <td>"O" document referring to an oral disclosure, use, exhibition or other means</td> <td></td> <td></td> </tr> <tr> <td>"P" document published prior to the international filing date but later than the priority date claimed</td> <td></td> <td></td> </tr> </table>			* Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	"A" document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	"E" earlier document published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"G"	document member of the same patent family	"O" document referring to an oral disclosure, use, exhibition or other means			"P" document published prior to the international filing date but later than the priority date claimed		
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Date of the actual completion of the international search 17 DECEMBER 2001		Date of mailing of the international search report 04 JAN 2002																		
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230		Authorized officer D. NEAL MUIR Telephone No. (703) 308-1206 <i>Shigita Verney</i> Paralegal Specialist Technology Center 3700																		